

# Students' opinion on the changes to the pharmacy curriculum from 4 to 5 years and the change from a pre-registration year to a foundation year



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## Abstract

**Title:** Students' opinion on the changes to the pharmacy curriculum from 4 to 5 years and the change from a pre-registration year to a foundation year.

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**Introduction:** The current initial education of pharmacists is changing from a four-year course followed by a pre-registration year to a 5-year integrated course. A change like this has not previously occurred in the UK, but Canada and Ireland have previously made similar changes and research was conducted. This means there is no data concerning students' opinions about the changes in the UK, especially at this time, where the changes are recently announced. Therefore, it was important to try to gain an understanding of what these opinions are.

**Aim:** The aim of this study was to identify students' opinions and concerns with the proposed changes and whether there is a pattern based on year of study within the group.

**Rational and method:** Following ethical approval, a survey was developed and distributed amongst the current MPharm students at the University of Wolverhampton using an online survey. This included both quantitative and qualitative questions.

**Results:** What was found was a clear lack of understanding and confusion amongst the cohort around use of what these changes mean in the long term for the profession but also for students on an individual level. Also found was that many students believe the current curriculum doesn't provide students with enough clinical experience to be able to become independent prescribers, despite the fact many of them intend to become independent prescribers and would be more likely to become pharmacists had it been in place.

**Conclusion:** This study identifies a desire and a need to change the curriculum, but also a lack of communication to students which could be addressed.

## Introduction

Currently, in the UK, becoming a registered pharmacist takes a minimum of 5 years. Four of those years are spent at university obtaining a Master of Pharmacy (MPharm) degree on an accredited course, and one-year training in practice before sitting a final exam

(GPhC, 2020). However, this is set to change: in a joint letter from the Chief Pharmaceutical Officers and UK Pharmacy Regulators in July 2020, it was announced that discussions by the General Pharmaceutical Council (GPhC) had identified a need for change in the pharmacy curriculum to reflect the rapidly evolving roles pharmacists play in practice. This letter

referenced the importance of a “continuum” of five years of education and training (Rudkin et al., 2020). This has been echoed in a joint letter on behalf of Alan Ryan, Director of National Transformational Programs, Health Education England and Richard Cattell, Deputy Chief Pharmaceutical Officer, NHS England and NHS improvement (2020), which presents a similar need for the reform of pharmacy education. It speaks again of the new services that pharmacists are required to provide, and the additional training that is required. It points to the initial education and training currently in place, not being sufficient to provide these services. This letter also states that the Covid-19 pandemic and its effects on the current pre-registration pharmacists provides an opportunity to accelerate this reform.

This was supported by Health Education England who released a review of the advancing pharmacy education and training, addressing the need for equipping pharmacists with appropriate clinical experience in a range of areas, to better sustain the NHS. This document outlined several principles that the foundation year would build on, including increased experiential learning, alignment with a national curriculum and it would be appropriately and sustainably funded at a range of levels (HEE, 2019). The proposed reform, while not finalized, is to replace the current pre-registration year with a one-year foundation program to provide the 5th year of education and training. From as early as summer 2021 this change is being introduced (HEE, 2019). At the time of writing, these plans are not final and the ambiguity regarding the funding has been noted by the Pharmacy Schools Council who have raised concerns about universities having to pay for the extra expenses (Andalo, 2019) and contribute to learning in

practice places. Other issues include the students losing the pre-registration salary while paying fees for another year at university (Burns, 2019).

Other countries have used a similar system to the current one used in the UK such as Australia (Marriot et al., 2008), New Zealand (Careers.govt.nz, 2020), Canada (CPhA, 2011) and Ireland (Strawbridge et al., 2019). There have been similar changes already made in Canada and the Republic of Ireland, who reformed the curriculum as can be seen in table 1 below.

A PharmD is the clinical university degree program a pharmacist must complete in America. The Canadian programme closely mirrors the American; two years, undergraduate coursework, followed by a four-year professional degree program (Knoer, Eck and Lucas, 2016).

The changes proposed in the UK have a stark difference from the changes made in Canada and Ireland; the UK changes are aiming to provide future students with the ability to independently prescribe upon graduation (Rudkin and Patterson, 2020). Currently in order for a pharmacist to become an independent prescriber (IP) they must have been registered and practising in a patient facing role for a minimum of two years (GPhC, 2021). The changes to the curriculum may allow pharmacists to become IPs faster, and in a similar way to how nurses can become prescribers. Previously, practising nurses needed to have two or three years of experience to become a prescriber, this has already changed in a similar way to the proposed pharmacy changes.

The Nursing and Midwifery Council (2021) state that, rather than having to have a set number of years' experience, nurses trained under new standards must

	Previous curriculum	New curriculum
Canada	Bachelor's degree comprised of 4 years undergraduate education followed by one-year pre-pharmacy education (CPhA, 2011).	Doctor of pharmacy degree consisting of 2 years of pre-pharmacy undergraduate education followed by four years of pharmacy education (CPhA, 2011).
Ireland	Four-year bachelor's degree followed by a pre-registration year (Strawbridge et al., 2019)	Integrated 5-year Master of Pharmacy program (PSI, 2020)

**Table 1: Comparison of the changes in curriculum between Canada and Ireland**

prove they are capable of safe and effective practice at a level of proficiency appropriate to the programme undertaken, and the intended area of prescribing practice. This could be through CPD, training modules and relevant experience.

Both nurses and pharmacists can only prescribe within an area of expertise so while nurses could possibly take only four years of education and training to begin a prescribing course, current pharmacists must undergo at least seven. This is a large difference, and the pharmacy course is currently purely time dependent, whereas the new nursing standards are down to evidence of competence. This could be a model that the pharmacy curriculum may follow, although this has not been confirmed.

Examining the changes made to the Canadian curriculum as outlined by the CPhA (2011), they mandate a large increase in the number of practice hours that students must undertake throughout their course, provide a much greater emphasis on experiential learning. This is designed to better tailor the care pharmacists provide to the needs of the Canadian healthcare system. The reasoning for the changes is similar to the reasoning for the proposed changes in the UK. The practice hours take place over several placements throughout the course, and each placement must be approved by a preceptor. They suggest that by being passed by numerous preceptors they are more likely to have a passing grade than if they were passed by a single preceptor. This is something that the current system in the UK mostly lacks as a large majority of pre-registration places are in a single setting with a single tutor (Mulherin, Legal and Ijaz, 2016).

Ireland changed their requirements for pharmacist registration from the four-year degree preceding a pre-registration year, following concerns over the pre-registration year having inadequate assessments, lacking clear educational objectives and poor central quality control. It was replaced by the National Pharmacy Internship Program (NPIP). This was designed to ensure new pharmacists would provide services safely, professionally and effectively and develop their knowledge and skills in a practice environment with participants awarded a master's degree (Strawbridge et al., 2019). Their aim was to create a new integrated five-year MPharm program

and since September 2015, all new students starting a pharmacist qualification in Ireland have been undertaking a Master's degree programme while the NPIP qualification concluded at the end of the 2018/2019 academic year (PSI, 2020). For some Irish students this was not a welcome change, with over 500 students from 3 schools of pharmacy protesting against the new degree (Paul, 2019). The main cause for protest was due to the salary for completing a pre-registration year being removed while the additional fees for completing a Master's degree had been added on with fees, at the time, for the 5th year being between €7500 and €8500 depending upon the school of pharmacy (USI and PSA, 2019).

As the response in Ireland was not all positive, it could be expected that similar reactions may occur in the UK. Whilst it is a different country and a different cohort of students there is the ambiguity around funding that is cause for concern. There has been an announcement to say that current MPharm students will not have to pay additional fees and are still going to be employed for the 5th year, but there is still no clarification on where future students will stand in regard to funding. It also remains the case that a degree will still be awarded after 4 years (Rudkin and Patterson, 2020). It would be interesting to see how opinions differ between years of study and if this poses more of a concern to newer students.

From June 2021, there will also be a common registration assessment over the four countries in the United Kingdom aiming to create a more uniform set of standards that all pre-registration pharmacists must pass regardless of where in the UK they are from. This would improve the quality control of the assessment, which was an issue that contributed to Ireland's change of the curriculum (GPhC, 2019).

Despite the adjustments in Canada's curriculum to more closely resemble America's, and the changes to Ireland's curriculum, a recent study from Australia (Pharmacy Board of Australia, 2020) found that while feedback raised concerns over whether there were inconsistencies in the way their curriculum was run, a majority of interns and preceptors agreed that the internship year provided them with the necessary skills and knowledge to practice as competent and independent pharmacists.

Considering this curriculum more closely resembles the current UK curriculum, this could mean that many pre-registration students and their tutors are satisfied with the level of experience and competency gained during this year. Despite the apparent satisfaction with the intern year, this report also found interns find balancing full-time work and full-time study stressful, this issue may not be as prominent where the practice experience is gained during placements split over the final years rather than in one year as is currently the case in Ireland.

## Methods and Design

While the main question being asked was broad - what opinions do students have? - this needed to be derived from several questions. Crucially, do the students perceive this change as positive, negative or would it

make very little difference? Did the opinions differ between the years of study depending on how much they felt they might be affected by these changes? How will it affect future pharmacists? Will it affect potential students' likelihood to select this degree? Would students have been more or less likely to pick the course if the proposed changes had been in place when they were choosing their degree?

## Aim

The aim of this study was to develop an understanding of pharmacy students' opinions on the proposed changes to merge the pharmacy curriculum and the pre-registration year and its impacts on those undertaking the course.

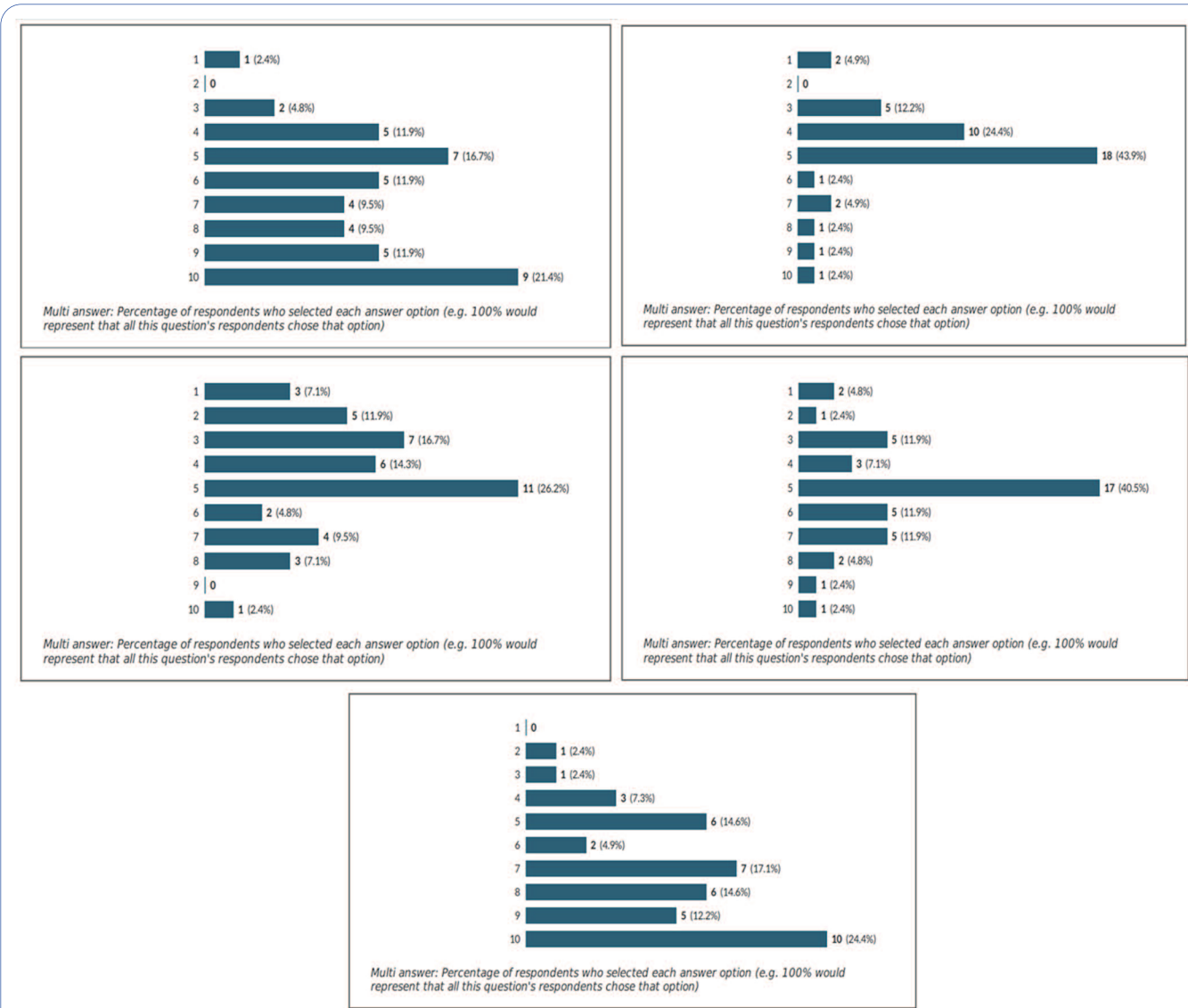


Figure 1: Responses to rating questions

## Methods and Design

This study was survey-based using closed and open questions. The questions were developed after a literature review of grey documents (reports or position statements) and primary literature to understand the reasons for the programme review and proposed changes.

The Online Survey<sup>®</sup> builder, under university licence, was used to develop the online survey including the participants' information sheet, and a link was generated and distributed via public announcement using the MPharm programme online learning platform CANVAS<sup>™</sup> amongst current pharmacy students, from the first to the final year, inviting them to participate. The only inclusion criterion was that the participants were current students on the MPharm course. The main obstacle to gathering data of a survey-based project is that there are no in person events for the MPharm course due to Covid-19 pandemic.

The data were collected over November and December of 2020. The results from this survey were analysed and reported to illustrate a picture of the student's views. The data collected from the survey was collated into a Microsoft<sup>®</sup> Excel<sup>™</sup> spreadsheet for analysis. The responses to each question were grouped by year to determine themes and how opinions differ across years.

The qualitative data was thematically analysed to facilitate comparisons between years.

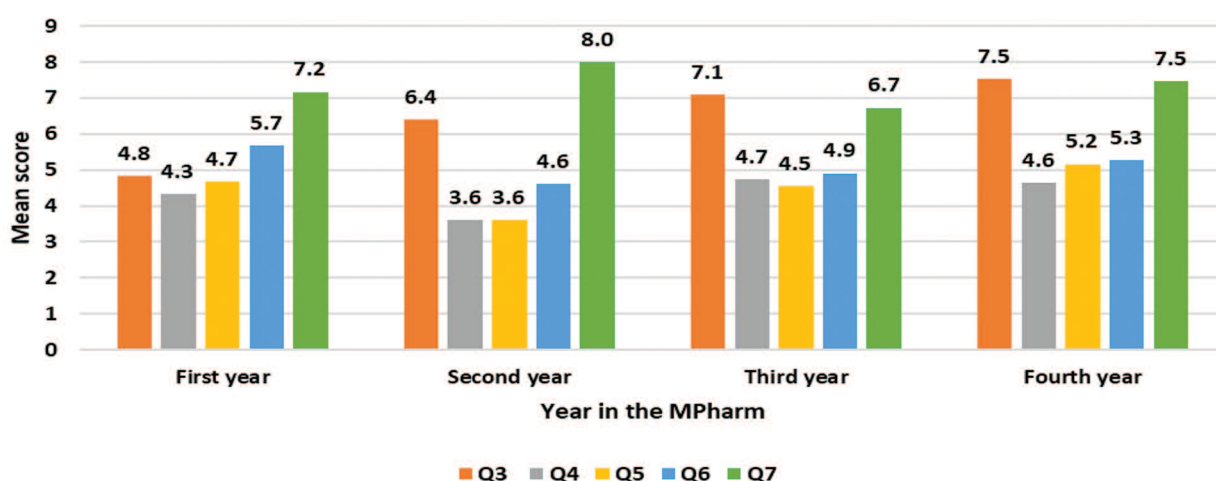
## Results

Out of 350 students enrolled in the MPharm programme, only 43 (12%) students participated. The low response reflects that, owing to the Covid-19 pandemic lockdown preventing other types of projects from proceeding, many more students than usual were undertaking survey-type research contemporaneously. There were 6 (14.3%) participants from first year, 5 (11.9%) participants from second year, 12 (28.6%) participants from third year and 19 (45.2%) participants from fourth year.

Students were asked if they had heard of the upcoming GPhC proposed changes to the MPharm and pre-registration year; 38 (90.5%) participants responded yes. Of those responding no, 3 were in year 1 and one was in year 3 of their studies.

The survey next asked participants to respond to five questions using a scale from 1 (very detrimental) to 10 (very beneficial), the responses can be seen in figure 1 (all participants) and figure 2 by year in the MPharm course.

Analysing the results on a year-by-year basis, it was found that students' main concern, was the loss of one year pay whilst in addition gaining an extra year of fees (Question 7). All students seemed to welcome the concept of improving the clinical experience (question 3) and agreed to the changes would impact the current student cohort (Question 6).



Q3: Compared to the current curriculum, how will the changes affect students clinical experience?

Q4: Compared to the current curriculum, how will the changes affect student's financial situation?

Q5: Compared to the current curriculum, how will the changes affect students work/life balance?

Q6: Compared to the current curriculum, how will the changes affect current students?

Q7: Compared to the current curriculum, how will the changes affect future students finance (their earning during the pre-registration year and finance with additional year fees)?

**Figure 2: Mean scores by year in the MPharm course**



When students were asked about their thoughts about being able to independently prescribe as soon as they graduated and registered, 26 (61.9%) of the participants responded positively (66% of first year, 75% of second years, 73% of third years and 53% of fourth years).

Asked to justify their choice; the responses can be seen in table 2. Only 34 students left a written response. Key themes identified across the years were that students welcomed becoming IPs, providing that

the course is adjusted appropriately to prepare them to do that. However, they also clearly expressed their perception that the current curriculum does not provide them with enough experience to facilitate this, and the belief that not every pharmacist will need, or want, to become an IP.

Asked if they would make the same decision again to join an MPharm course if they had previously known about the proposed changes, 30 (73.2%) of participants

Year	Yes	Positive Codes	No	Negative Codes
1	<p><i>"It's an important aspect in Pharmacy to be able to prescribe"</i></p> <p><i>"Yes, because students after registration must be able to demonstrate that they have the sufficient clinical knowledge and experience in order to diagnose and confidently prescribe the appropriate medications according to NICE guidelines etc."</i></p>	<p><b>Prescribing is relevant to pharmacy practice</b></p>	<p><i>"The range of prescribing is so vast, many students do not know which sector or even interest they would choose upon registration. For example, somebody may attain a pre-registration placement in community, but go on to a role in Aseptic. So, their initial prescribing experience may not be relevant for following years"</i></p> <p><i>"I think they shouldn't because mistakes are easy to make and a mistake early in their career could lead to them never being able to prescribe again this is unfair as they are new and are expected to make mistakes"</i></p>	<p><b>Prescribing is not relevant to pharmacy practice in all settings</b></p>
2	<p><i>"If the foundation year is going to be more clinical based, then surely the students will have knowledge skills to be able to prescribe"</i></p> <p><i>"Because I believe after registering you would have a lot of knowledge of not only medicines but also conditions so it only makes sense to me that students should be allowed to independently prescribe after registering"</i></p> <p><i>"I believe that 5 years in pharmacy school is enough to be a prescriber, given the clinical courses are adjusted accordingly"</i></p>	<p><b>Prescribing should be integrated into the pharmacy undergraduate course</b></p>	<p><i>"Because students are newly qualified, they should experience working as a pharmacist in general before being able to prescribe as prescribing is a step beyond what they've learnt so far and should take time before this happens. And so, the separate prescriber course should be kept when pharmacists want to become prescribers in future"</i></p>	<p><b>Prescribing should not be integrated into the pharmacy undergraduate course</b></p>
3	<p><i>"I think that during the degree we are taught many drugs, we do dispensing and we are aware of side effects, monitoring etc."</i></p> <p><i>"The MPharm course should be changed so more clinical and face to face experience to enable students to be comfortable around patients"</i></p> <p><i>"As community pharmacists are becoming less desirable it is important to ensure that they have as many skills and knowledge as possible"</i></p> <p><i>"Because by the time we graduate we should be able to diagnose and know what drug will be the best option for them, we can basically do what a doctor is doing"</i></p>	<p><b>The balance between dispensing and prescribing is small and can be integrated</b></p>	<p><i>"I think a certain degree of experience would be necessary for them to prescribe"</i></p> <p><i>"I think students should be familiar with independent prescribing and choose to whether go into independent prescribing or not"</i></p>	<p><b>The balance between dispensing and prescribing is great and cannot be integrated</b></p>

**Table 2: Qualitative responses when asked if students should be allowed to prescribe immediately after registering.**

Year	Yes	Positive Codes	No	Negative Codes
3 (Cont.)	<p>"Yes, they have a sufficient amount of knowledge"</p> <p>"As you are aware of the signs and symptoms of general problems that occur with people"</p> <p>"I think if the student has undergone training as part of their foundation programme to become an IP then once they are registered they should be able to practice this"</p> <p>"A pharmacist is a specialist in medication and understand how a medicine works, why and any side effects that could occur. There is a less likely chance of a patient being given the wrong medication and optimisation could occur"</p>			
4	<p>"It is an integral part of the job"</p> <p>"They are qualified enough to write a prescription, but should be trained first as pre-reg for example"</p> <p>"It is very valuable since the role of a pharmacist is evolving to include more responsibilities"</p> <p>"Fourth years will have fresh clinical knowledge and as long as the foundation year presents with different scenarios that will mimic pre-registration, I think I will prove beneficial"</p> <p>"I feel that while the knowledge is still fresh and we still learning would be much better now then later"</p> <p>"Provided the changes implemented are sufficient to equip students with the right clinical and social skills to become prescribers, I think becoming prescribers is appropriate"</p> <p>"As long as they receive the appropriate training I don't see why not. As current pharmacists have to do an additional course for this anyway, so I think it will be beneficial if it is integrated into their course"</p>	<p><b>Clinical placement is essential</b></p>	<p>"I think a certain level of experience is required that isn't necessarily achieved until after fully qualifying and working as a pharmacist"</p> <p>"Extensive experience would be required before prescribing and the current MPharm degree doesn't offer much placements"</p> <p>"Experience is must before prescribing independently because they are still learning and under training. Therefore, I do not think it is better option"</p> <p>"As much as I would like to say yes, my honest answer is no. I believe after registering a student still needs more experience, especially those students who haven't had a long-extended experience within the pharmacy environment whether that is via community or hospital, during their university years, as these students have only gathered experience truly via their pre reg. 2 years is enough including pre reg, in order to be able to independently prescribe in my opinion"</p> <p>"Need more experience in dealing with medicines"</p> <p>"I feel like they don't have much experience"</p> <p>"unless there isn't prescribing teaching within the course then students will not be able to prescribe straight away"</p> <p>"I believe some experience is vital before being able to prescribe. There are many things that can only be learnt through practise and so teaching straight away and then giving that prescribing right without the students having had any actual long-term experience is may not benefit them in being able to correctly and effectively prescribe"</p> <p>"Pharmacy students receive nowhere near enough clinical training while at university. Therefore, I would not be confident to prescribe straightaway"</p>	<p><b>Real world work experience not placement is essential</b></p>

**Table 2 (Continued): Qualitative responses when asked if students should be allowed to prescribe immediately after registering.**

responded 'yes.' Only 17% of first years responded yes, for years 2 and 3, 100% of students responded yes and for year four, 68% of students responded yes. The participants were then asked if they thought the changes will impact them personally, now or in the near future, 28 (66.7%) participants responded yes. First year students were 50/50 split, where 100% of second year, 64% of third years 63% of fourth year said yes (Table 3).

The key themes identified included; concerns raised by participants at all stages, that students qualifying

as an IP will have better employment prospects and this could be detrimental to current students. Several students also felt that they may be pushed into becoming an IP, in order to keep up with the changes. A few students stated it will affect them due to the changes in the pre-registration year. Another theme was that students felt confused or unsure about what the changes will bring e.g. additional placements and additional pressures. A final theme was from earlier year students who noted that they were intending to become IPs anyway.

Year in the course	Yes	Negative Codes	No	Positive Codes
1	<p>"We will likely by the final year of students who do not have an IP course included within the degree. This could hinder job opportunities where employers may favour those with an IP qualification"</p> <p>"Getting placements, more studying"</p> <p>"In terms of new pharmacists competing for a job with me they could have an advantage"</p> <p>"if it not rolled out for the current students I will not be the beneficiary of the curriculum change"</p>	Inequality, disparity in pharmacy education and job opportunities	<p>"I intend to do the course after anyway"</p> <p>"My aims are to complete the MPharm and registration, obtain experience within clinical Pharmacy and then find a DMP and do the non-medical independent prescribes course"</p>	Additional training to reduce disparity in pharmacy education and job opportunities
2	<p>"Finally as current per reg year students are employed/paid. Better chance of employment if IP trained and will not have to wait 2 more years to become IP"</p> <p>"Being a prescriber before you've yet to have certain experiences working in pharmacy might be a bit overwhelming"</p> <p>"Though I'm not a part of the year group that it'll take effect, the fact that this is coming into place makes me want to get additional qualifications i.e., do additional studies to become an IP after having graduated as it shows that pharmacists are becoming more value"</p>	Inequality, disparity in pharmacy education and job opportunities and financial burden due to having to pay for IP course		
3	<p>"It changes my knowledge and what I understood about the current curriculum. Its more confusing"</p> <p>"Job prospects. Finding a Pre Reg placement more difficult"</p> <p>"I may have to follow previous rules, where experience is required to become a prescriber and newer students would not need to be experienced at all"</p> <p>"Because I feel like I'm more than a pharmacist, if I am able to prescribe it's like I can apply my knowledge to something"</p> <p>"As it would cause changes for us when the course does change"</p> <p>"Foundation year will be more of a mix between learning and working compared to pre-reg year which was mostly about working in community or hospital"</p>	Confusion, inequality, disparity in pharmacy education and job opportunities	<p>"I wanted to become an IP anyway so this works in my favour"</p> <p>"I fail to see how it would affect myself currently or in the future as I would like to do an independent prescribing course in the future, however if it was implemented in the current MPharm course then it would save me time I guess"</p> <p>"I was going to get my IP degree anyway"</p>	Confusion, no sufficient communications

**Table 3: Qualitative responses when asked if the changes would affect them personally.**



Year in the course	Yes	Negative Codes	No	Positive Codes
4	<p>"Those after me qualify as prescribers and are better placed in the job market"</p> <p>"Not sure we don't have enough information about what exactly is happening with this"</p> <p>"I think it will oversaturate the prescribing roles unless new ones are created This may bring down the pay rate"</p> <p>"It will make a bit harder for us because I cannot prescribe independently therefore, we might lose some opportunities"</p> <p>"Students in lower years will have an advantage of obtaining the IP before current 4th years"</p> <p>"these changes will allow a faster pace of change in the pharmacy sector no matter what stage you're at"</p> <p>"I feel that future students will be in more demand as pharmacist, as they can prescribe"</p> <p>"Even though I was already planning to become a prescriber myself, this will add the pressure to do it sooner as I will have more competition when applying for jobs as these younger pharmacists may have more qualifications than me"</p> <p>"Changes are proposed to take place starting Spring/Summer 2021 which is the start date for our pre-reg year"</p>	<p>Confusion, inequality, disparity in pharmacy education and job opportunities</p>	<p>"I believe these changes will take place gradually"</p> <p>"I don't think it would"</p> <p>"I don't think it will affect registered pharmacists in any way"</p> <p>"I don't think it will impact me personally as I am in 4th year and I will be carrying out pre-reg normally like the previous years"</p>	<p>Confusion, no sufficient communications</p>

**Table 3 (Continued): Qualitative responses when asked if the changes would affect them personally.**

The final question was left open for students to note any other concerns or questions they wanted to raise; four students gave a response, three of those were first year students, one was a fourth year (Table 4). The

main point is that they feel there is a lack of information available to them about how these changes will be implemented.

Year	Response	Positive Codes	Negative Codes
1	<p>"Many pharmacists simply do not require an IP service. If you are working in sterile services or on a generic hospital ward, there are many doctors to undertake the prescribing. So you will be attending university for another year, with more debt, for a qualification you can't use. The increase of years may push potential pharmacy students into medicine due to the closing of the study gap"</p> <p>"Reducing the number of fee if they are adding an extra year"</p> <p>"Financially, regarding funding for the course, SFE will have to be flexible and accommodate the additional year of funding, alternatively an NHS or other body bursary for fees etc must be arranged. As with everything, pharmacy too is evolving. The old/traditional community Pharmacy model isn't working. There are a huge shortage of health care professionals e.g., doctors, and services are being inundated with high volume of visitors. They are unable to cope, a pharmacist with the integrated clinical skills development within their degree will help address this issue, as they can perform preliminary triage, take medical histories, order necessary tests, interpret said tests, and prescribe medication or refer to appropriate primary care service or alternative service depending on the acuity of the patients presenting symptoms"</p>	<p>The current pharmacy model is not working</p>	<p>Qualifications will not be used by all graduate</p> <p>Unreasonable competition with doctors.</p> <p>Additional study year without actual benefit</p> <p>Annual fees should be reduced to compensate for the extra year</p> <p>Fees support or relief by NHS /HEE should be in place</p>
4	<p>"More information is required about the foundation year such as what will happen to the pre reg positions, how will IP will be implemented, is this a full time foundation year course so we will studying or will it be split into working as pre reg and as a student for the foundation year. Pay needs to be discussed too"</p>		<p>Confusion about financial implications and structure of the foundation / IP integrated year</p>

**Table 4: Final responses**

## Discussion

The majority of students who completed the survey were fourth year students. This could be because that group had a greater interest in the topic. Most students in third and fourth years of the MPharm thought that the changes are going to improve future students' clinical experience, where students in first and second year perceived that there is sufficient clinical experience in the current course. As the changes in Canada and Ireland gave students more clinical experience, these UK students believed the changes in the UK curriculum will achieve similar outcomes. Students in their 3rd and 4th years thought that the pre-registration year changes will not affect their finance where students from first and second years felt that the changes will be detrimental to the financial situation as they were unsure about how this would be funded or whether it would be classed as unpaid placement.

Years 3 and 4 students did not think there will be a change in students' work-life balance. This could be because they will finish the course and register before the changes take place. Students in years 1 and 2 believed that the current course workload is large and it will be even greater after the changes, due to more placement and workplace learning rather than being able to work on assignments in their own time and having weekends off, which is perceived to be rarely possible during pre-registration.

Concerning the impact of the changes on the current students, all believed that they will be affected because no current students are likely to be able to become IPs immediately after they qualify. Fourth year students agreed that there is a need for pharmacists to become IPs and adjustments should be made in the course to facilitate this.

There was a divide in opinions regarding the benefit of the changes which could be due to a lack of information disseminated to students from the GPhC and Schools of Pharmacy.

First year students felt it unfair to give the newer students an IP qualification that might lead to them having more job opportunities and income advantages. Fourth year students stated that they believe there needs to be more clarification around what the changes actually mean.

First year students felt it unfair to give the newer students an IP qualification that might lead to them having more job opportunities and income

advantages. Fourth year students stated that they believe there needs to be more clarification around what the changes actually mean. First year students raised the issue of funding, and how the extra year at university would be paid for, one even saying that Student Finance England would have to accommodate the extra year, or another government body would have to fund it. Another student in first year stated that not all pharmacists' roles require an IP qualification and that students will be spending another year at university with extra fees and debt for a qualification they may never use. Therefore, despite the fact that all fourth-year students had heard of these changes and they clearly have an interest in them, they stated that there is a deficit in information surrounding the funding and pay that need to be disclosed by the GPhC. While some very few universities started the five years courses, it is very early years and the final years curriculum, the clinical placement practicality and cost are not yet put into test. Additionally, the outcome, the new type of pharmacists graduated from the five year course, the ability for the institutions to sustain placements places, the affordability of the course to students populations, are not yet evaluated.

## Limitations

The study had some limitations imposed upon it by the COVID-19 pandemic, where interviews and focus groups were not permitted. The use of the online survey limited the number of questions been asked and the number of participants. The lack of information accessible to the students regarding the details of the changes limited how students responded. Other factors that may have influenced the students' opinions is previous work experience within the profession, as some students may have worked in pharmacy before, some may already be technicians and are advancing their career while others may have never worked in pharmacy before. This could influence how much they understood about the profession and the roles of IPs, as well as how much information to which they may have access.

## Conclusion

The results from this survey suggest that students mostly believe that having an IP qualification is beneficial, although some disagree. Fourth year students in particular did not believe that there is

enough clinical experience on the current course and that it does need adjusting. They also identified a deficit in information surrounding how these changes are going to be put into practice, how the course will change, how will it be funded and what this means for students and pharmacists alike.

Health Education England (HEE), both to students and to the universities and training sites.

- There needs to be more information also available to pharmacists regarding how this change will affect them and how the current workforce will be upskilled.

## Recommendations

- More information is required from the GPhC and

## Declaration of interests

The authors have no declarations of interest to make.

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## Appendix 1: Ethics approval letter

### School of Pharmacy Ethics and Review Panel

**Student/staff name and ID number:** Eden Maxwell, 1704015

**Supervisor name:** Hana Morrissey

**Project Title:** Students opinion on the changes to the pharmacy curriculum from 4 to 5 years and the change from a pre-registration year to a foundation year.

### Outcome: Approved

Thank you for submitting the above project for scrutiny by the School of Pharmacy Ethics Review Panel. I am pleased to confirm that the project has been approved and may now proceed.

Please note that it is a requirement that your student must follow the research methodology that they have outlined in their application. Any deviation from the approved methodology – which includes all aspects of data collection - should be communicated to the panel prior to their use. Failure to follow the ethics approved research methods could result in those involved being reported to the University for Academic Misconduct.

In the event of an inadvertent deviation from approved ethics documentation, the panel should be informed as soon as practicable.

Please remember that any data collected from volunteers must be protected in conditions of complete anonymity and confidentiality at all times.

Finally, we wish you every success with your project, and the eventual successful completion of your resulting dissertation.

### Kind regards

*Chair School of Pharmacy Ethics and Research Panel*  
Date approved: 28/10/2020

## Appendix 2: Questionnaire

Survey regarding students opinion on the changes to the pharmacy curriculum from 4 to 5 years and the change from a pre-registration year to a foundation year.

1) What year of study are you currently in?

1	2	3	4
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2) Had you heard of the changes before completing this survey?

Yes / No

Answer the following questions on a scale of 1 to 10, 1 being very detrimental, 5 being no effect and 10 being very beneficial:

3) Compared to the current curriculum, how will the changes affect students clinical experience?

1	2	3	4	5	6	7	8	9	10
Very detrimental				No effect					Very beneficial

4) Compared to the current curriculum, how will the changes affect student's financial situation?

1	2	3	4	5	6	7	8	9	10
Very detrimental				No effect					Very beneficial

5) Compared to the current curriculum, how will the changes affect students work/life balance?

1	2	3	4	5	6	7	8	9	10
Very detrimental				No effect					Very beneficial

6) Compared to the current curriculum, how will the changes affect current students?

1	2	3	4	5	6	7	8	9	10
Very detrimental				No effect					Very beneficial

7) Compared to the current curriculum, how will the changes affect future students?

1	2	3	4	5	6	7	8	9	10
Very detrimental				No effect					Very beneficial

8) Do you think students should be able to independently prescribe straight after registering?

Yes / No

Please provide a reason for your response in the box below:

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9) Would you have been more likely to decide on this course if the curriculum was as proposed when you were deciding on a degree?

Yes / No

10) Do you think these changes will have an impact on you personally, now or in the future?

Yes / No

If no, please provide a reason why you think it won't affect you in the box below:

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If Yes, please explain what impacts you believe it will have in the box below:

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If there are any questions you wish to expand on, or any points not covered in the survey you would like to make please use the space below to do so:

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Thank you for your participation.